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A SYSTEM AND METHOD FOR PROVIDING HIGH-QUALITY STRETCHING AND COMPRESSION OF A DIGITAL AUDIO SIGNAL

10   **ABSTRACT OF THE INVENTION**

An adaptive "temporal audio scaler" is provided for automatically stretching and compressing frames of audio signals received across a packet-based network. Prior to stretching or compressing segments of a current frame,

15   the temporal audio scaler first computes a pitch period for each frame for sizing signal templates used for matching operations in stretching and compressing segments. Further, the temporal audio scaler also determines the type or types of segments comprising each frame. These segment types include "voiced" segments, "unvoiced" segments, and "mixed" segments which include both

20   voiced and unvoiced portions. The stretching or compression methods applied to segments of each frame are then dependent upon the type of segments comprising each frame. Further, the amount of stretching and compression applied to particular segments is automatically variable for minimizing signal artifacts while still ensuring that an overall target stretching or compression ratio

25   is maintained for each frame.